

ABSTRACT

In an optical communications network, an optical add/drop node that is flexible to support changing traffic demands, and also induces little loss to the signal. The optical add/drop node of the present invention utilizes a filter that is capable of adding and dropping wavelengths across different bands in a multiplexed signal. The Optical Add/Drop Node of the invention is flexible to adjust with changing traffic demands by reserving bandwidth for future use. The present invention provides immediate scalability to the optical network without requiring reconfiguration of the network architecture. In addition to providing flexibility for future expansion, the invention also reduces loss to the signal passing through the network. This is accomplished by reducing the number of connection points in the filter relative to an alternative flexible add/drop solution.

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